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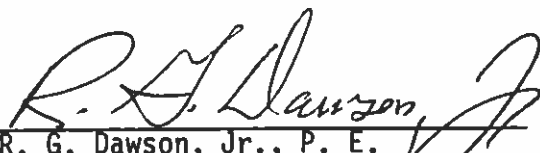
FEASIBILITY STUDY

NC 55
US 17 to NC 304
Craven and Pamlico Counties
R-2539

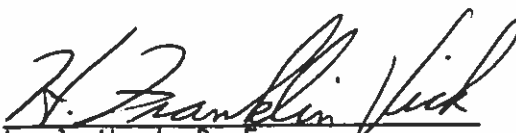
Prepared by
Planning and Research Branch
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I. GENERAL DESCRIPTION

This feasibility study covers the proposed widening of NC 55 from US 17 in Craven County to NC 304 in Pamlico County, a distance of 15.5 miles. This project is included in the 1990-1996 Transportation Improvement Program for feasibility study and/or right-of-way protection. The location of the project is shown on Figure 1.

II. PURPOSE OF PROJECT

Existing Route Characteristics

NC 55 is the major east-west route in Pamlico County, and it serves as the primary link between Pamlico County and the City of New Bern. The western end of the project is included in the New Bern Thoroughfare Plan as a Major Thoroughfare, and eastern portion of the project is included in the Pamlico County Thoroughfare Plan as a Major Thoroughfare. NC 55 is classified a Rural Major Collector in the North Carolina Functional Classification System for most of the project length; however, the portion of the project within the town limits of Bridgeton is classified as an Other Urban Principal Arterial.

The existing cross section on NC 55 consists primarily of a 22-foot pavement with 10-foot unpaved shoulders. Beginning in Alliance, NC 55 has been widened to a 33-foot pavement with 6-foot shoulders, which changes into a 44-foot curb and gutter cross section with parallel parking and sidewalks on both sides in Bayboro. The roadway has also been widened to provide a center left-turn lane at the intersections of US 17 and SR 1600 in Craven County and at the intersection of NC 306 in Pamlico County. The existing right-of-way on NC 55 from US 17 in Bridgeton to NC 306 in Grantsboro was originally acquired as a 100-foot width, however there are still a number of agreements on file which have not been recorded. From NC 306 to NC 304 in Bayboro the right-of-way width is variable. Right-of-way acquisition for this portion of the project was completed during 1952 and 1953 by easements, which are recorded in the Pamlico County Registry. From NC 306 to just west of SR 1348 the right-of-way is 100 feet wide, from this point to just west of SR 1203 it is 150 feet wide, from SR 1203 to a point approximately 1800 feet west of NC 304 the right-of-way width is 100 feet, and for the remainder of the project it is 80 feet wide. The horizontal alignment of the roadway is fair, with two 6-degree curves and seven 4-degree curves. The vertical alignment is good, following the flat terrain of the area. All intersections on the project are at grade. The US 17 and NC 306 intersections are signalized, while the remaining intersections are controlled by stop signs on the minor route. The existing speed limit is 55 mph throughout most of the project length. The speed limit is reduced to 45 mph through Reelsboro and Alliance, and further reduced to 35 mph in the towns of Bridgeton and Bayboro and through the NC 306 intersection in Grantsboro. There is also one short 25 mph zone from Fourth Street to NC 304 in Bayboro.

Three bridges are located along the project and are described below. None of these structures are scheduled for improvement in the current Transportation Improvement Program.

<u>Bridge No.</u>	<u>Location</u>	<u>Date Built</u>	<u>Length</u>	<u>Sufficiency Width</u>	<u>Rating</u>
65	Upper Broad Creek	1950	213'	26'	67.0
19	Deep Run Creek	1923	70'	26'	57.4
32	E. Fork Goose Ck.	1951	106'	26'	66.5

There is also one culvert on the project. It is a triple 7' x 8' reinforced concrete box culvert carrying a drainage canal. This culvert is located 1.7 miles east of NC 306.

Roadside development is primarily rural in character with large tracts of woodlands and farms surrounding the project. Much of the land immediately adjacent to the highway is characterized by low to moderate density residential development. Commercial development along the project is generally concentrated in Reelsboro, Grantsboro, Alliance, Bayboro, and along the approach to Bridgeton. Seven churches were observed along the project. There is also a cemetery located approximately 10 feet from the existing edge of pavement. Pamlico County High School is located on the south side of NC 55 in Bayboro, and the Pamlico County Courthouse is located on the north side of NC 55 in Bayboro.

Traffic Volumes, Capacity, and Accident Record

The current traffic volumes on NC 55 range from a low of 6900 vehicles per day (vpd) near Grantsboro to a high of 12,200 vpd at the western end of the project near Bridgeton. These volumes are projected to increase to 12,500 vpd and 22,000 vpd, respectively, by the year 2010. With the current traffic volumes, NC 55 is operating at Level of Service D throughout most of the project length. As traffic volumes continue to grow, the level of traffic service will deteriorate in the future if no improvements are made to NC 55. With the proposed widening, the highway should operate at Level of Service C or better throughout the planning period.

During the period from January 1, 1986 through October 30, 1989, a total of 238 accidents were reported on the subject portion of NC 55. This resulted in an accident rate of 171.3 accidents per 100 million vehicle miles (ACC/100 MVM) compared to a statewide average of 214.4 ACC/100 MVM for all rural North Carolina routes over the same period. Two of the accidents resulted in fatalities and 128 others resulted in non-fatal injuries. The primary accident types involved vehicles running off the road and rear-end collisions. These types of accidents accounted for 56 % of the accidents. The widening of the road along with the provision of a continuous left-turn lane should reduce the potential for these types of accidents.

Need for Project

The widening of NC 55 in Craven and Pamlico Counties is needed to provide adequate capacity for existing and future traffic volumes. The proposed improvements will enhance safety and improve traffic operations in the area. The existing congestion during periods of peak traffic flow is a source of aggravation for motorists, and it impedes the operation of emergency vehicles. Since Pamlico County does not have a hospital, all emergency cases must be transported to the hospital in New Bern for treatment. All of this emergency traffic must use NC 55.

III. RECOMMENDATIONS AND COSTS

The widening of NC 55 to a multi-lane facility is immediately warranted. From US 17 to SR 1203 in Alliance, the recommended cross section is a 64-foot paved roadway providing four 12-foot travel lanes, a 12-foot center left-turn lane, and 2-foot paved shoulders. A total useable shoulder width of 10 feet is recommended. From SR 1203 to NC 304, a 64-foot, face to face of curbs, curb and gutter cross section is recommended which will also provide five lanes.

The estimated costs of the project are as follows:

Construction	\$17,500,000
Right-of-Way	<u>3,900,000</u>
TOTAL	\$21,400,000

The construction cost includes engineering and contingencies, and the right-of-way cost includes acquisition, relocation, and utility costs.

IV. ALTERNATIVES CONSIDERED

Since the proposed project involves the widening of an existing highway, no alternative alignments were considered.

The alternative of providing a four-lane cross section with left-turn lanes at selected locations was considered. If left-turn lanes are provided only at intersections and major commercial areas, a number of individual commercial driveways and residential driveways would remain without the benefit of a left-turn lane. This would result in drivers slowing and stopping in the left-lane to make turns. Drivers are normally accustomed to using the left lane as a high speed through lane and are not expecting vehicles to be stopped or turning from this lane. If left-turn lanes are provided for all driveways, most of the project would have this lane leaving only short gaps of four lanes, and many of these locations have the potential to become developed in the future. Due to the potential safety problems associated with turns from the left lane of a 55 mph facility, and the undesirability of having short gaps of four lanes in five-lane highway, a continuous five-lane roadway is recommended.

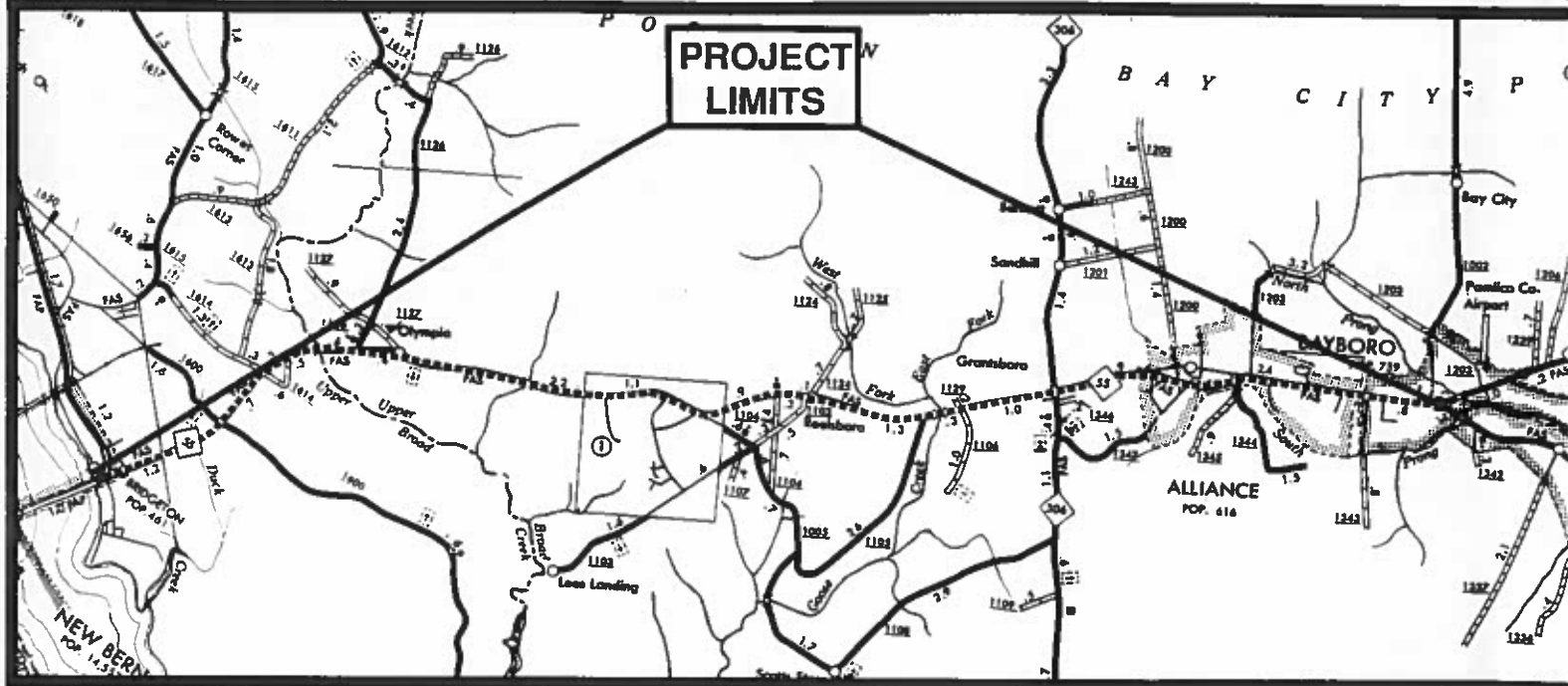
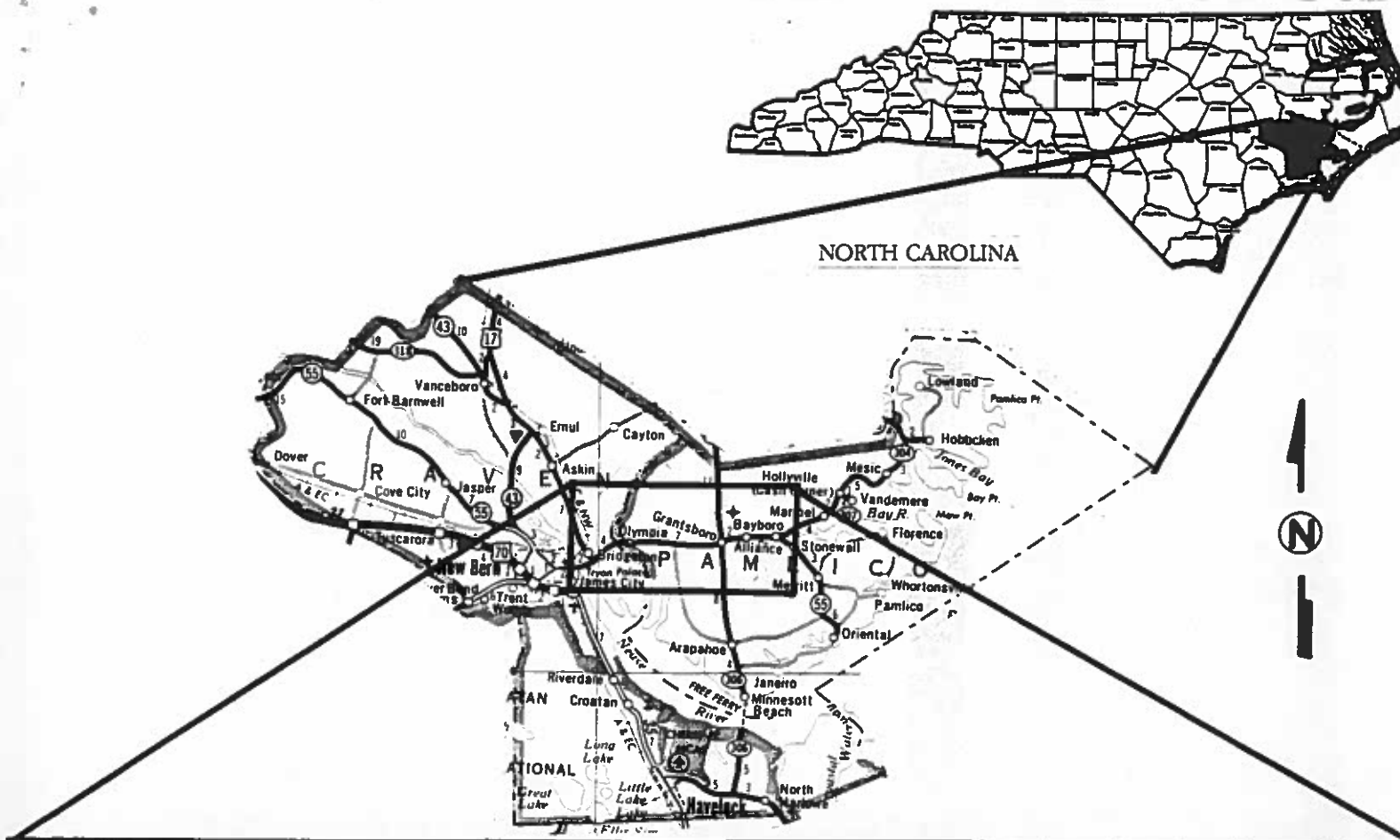
V. ENVIRONMENTAL EFFECTS

The implementation of the recommended improvements is not expected to result in any significant impact on the environment. The construction of the project will require the relocation of an estimated two residences. The project will also result in increased noise levels for remaining development adjacent to the roadway. Wetland impacts can be expected where the project crosses Upper Broad Creek, Deep Run Creek, and the East Fork of Goose Creek. Other impacts will be primarily related to the actual construction of the project and will cease upon completion of the project. These include minor erosion and siltation, increased noise levels from construction machinery, and delay and inconvenience to motorists and area residents.

VI. FUTURE ACTIVITIES

If the project is to be implemented at a future date, all feasible alternatives and their associated impacts will need to be evaluated in a planning/environmental document prior to that time, and a final decision made as to the most appropriate improvement.

RBD/plr



NORTH CAROLINA DEPARTMENT OF
TRANSPORTATION
DIVISION OF HIGHWAYS
PLANNING AND RESEARCH BRANCH

NC 55
FROM US 17 TO NC 304
CRAVEN-PAMLICO COUNTIES
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0 mi. 2 FIG. 1